



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

March 22, 2004

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the South El Monte Superfund Site

FROM: Jo Ann Griffith, Chair
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is placed over the printed name and title of the sender.

TO: Keith Takata, Director
Superfund Division
EPA Region 9

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the South El Monte Superfund Site. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates

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for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action

The South El Monte operable unit (OU) is one of several San Gabriel Valley Superfund Sites located in eastern Los Angeles County, California. Groundwater in the San Gabriel Valley serves as the primary supply of water for over 1 million residents and local businesses. EPA placed the sites on the National Priorities List in 1984 following the discovery of regional groundwater contamination by volatile organic compounds (VOCs). An Interim Record of Decision (ROD) to address VOCs in groundwater underlying the South El Monte OU was issued in 2000.

Since completion of the Interim ROD, perchlorate and 1,4-dioxane have been detected in the South El Monte OU at concentrations exceeding State of California action levels. Region 9 has proposed additional remedial actions in the South El Monte OU to contain and treat perchlorate and 1,4-dioxane. The proposed additional remedial actions will increase the cost of the remedy by over \$50 million.

NRRB Advisory Recommendations

The NRRB reviewed the information package describing this proposal and discussed related issues with site manager Lisa Hanusiak on December 2, 2003. Based on this review and discussion, the board offers the following comments:

1. Based on the information presented to the board, the region is proposing to amend the interim Record of Decision (IROD) for the South El Monte OU in order to address implementation issues presented by the detection of perchlorate above California state action levels in the production wells to be used to implement the VOC remedy. The board has the following concerns and/or comments in regard to this proposal.

- The State action levels for perchlorate and 1,4 dioxane are not ARARs.¹ However, the region has informed the board that, the water purveyors, as a practical matter, will not operate the production wells selected for the IROD remedy without treatment for perchlorate due to the provisions of Cal. H&SC 116455 and State DHS Policy Memo 97-005.
- Further, the exceedances of the action levels for these two substances were marginal and not uniformly present, with no discernable trends. The region's approach could lead to an overly conservative estimation of the risks posed by perchlorate and dioxane and thus overly costly response actions.

As a result of the above, the board believes that the current documentation should be supplemented because based on the risk information presented on perchlorate and 1,4 dioxane, the risks posed by those chemicals, standing alone, may not lead to a conclusion that a response action is advisable. Thus, even though the state action level for perchlorate has been exceeded at some particular wells triggering state requirements applicable to water purveyors, the board recommends that the region consider a larger data set to further characterize the risks, estimate concentration trends in the wells to demonstrate that these are ongoing and not transient exceedances, and further document the need to treat these contaminants to protect human health and the environment.

2. The board notes that the region has begun to identify sources and parties responsible for the perchlorate contamination in ground water. The board encourages further action in this regard, including investigation of potential sources and parties outside of this OU, as may be suggested by the presence of potentially higher perchlorate contamination levels at depth.
3. The region's cleanup proposal would pump and treat ground water in the shallow aquifer to remove 1,4-dioxane contamination and prevent the plume from spreading elsewhere in the basin. If the region is reasonably confident that 1,4-dioxane contamination sources are under control, it can be expected that contamination levels will decrease over time, with no additional action. Given this, as well as the board's concerns about the region's risk calculations (see # 1 above), the board questions whether treating the plume is cost

¹After the board's December 2003 meeting, Region 9 conducted further research and investigation into whether any ARARs exist for perchlorate and 1,4-dioxane. Region 9 has informed the board that, with respect to discharges to surface waters, it now believes that a California State ARAR may exist pertaining to perchlorate and 1,4-dioxane. This is Order No. R9-2002-0107, issued by the California Regional Water Quality Control Board, Los Angeles Region. This order, also known as General NPDES Permit No. CAG914001, requires that any entity discharging to a surface water in the Los Angeles Region must meet effluent limitations of 4 ppb for perchlorate and 3ppb for 1,4-dioxane. Region 9 is pursuing further research on this question.

effective. The board recommends that the region model the fate and transport of 1,4-dioxane at the site to estimate the potential impact on treatment at Whittier Narrows and to determine with more certainty what action, if any, is necessary.

4. Based on the information presented in the board package, the cost of treating perchlorate and 1,4-dioxane appears to be disproportionate to the risks posed by these contaminants. The board recommends that the region consider other alternatives, such as:
 - Blending water from multiple supply wells to reliably keep perchlorate and 1,4-dioxane below the California action levels,
 - Treating a portion of the influent from a contaminated supply well so that the treated volume can be blended with the untreated volume, resulting in a blended effluent that is below the California action levels for perchlorate and 1,4-dioxane, thereby reducing treatment cost,
 - Using a combination of water supply wells and new extraction wells to minimize the need to treat for these contaminants in the public water supply,
 - Evaluating in-situ treatments for all contaminants to minimize costs associated with meeting additional requirements for drinking water, and
 - Evaluating emerging technologies.

If the region has evaluated and dismissed these options, the rationale should be documented in the decision documents.

5. State policies discouraging the blending of water appear overly conservative in this instance. Based on the available ground water data, blending may enable the achievement of the perchlorate levels contained in the state policy. The board recommends that the region more fully explore this option with the state.
6. The board is concerned that the region evaluated a limited range of alternatives to address this operable unit. Other than the previously selected remedy, which the region has already determined needs updating, the board was presented with two alternatives. The board believes that even with taking into account that portions of the original remedy are in place, there may be other, more cost effective alternatives that should be evaluated. The board recommends that the region evaluate additional alternatives that include (singularly and/or combinations as appropriate) use of water supply wells with treatment, use of extraction wells with treatment and reinjection, temporary non-use of certain water supply wells, or blending water from water supply wells, until clean-up goals are met. The board also recommends that the region consider phasing the implementation of the remedy with the most contaminated wells or areas being addressed first. Future

actions could be adjusted based on the results of the earlier phases (i.e., MNA may become more viable as part of a containment remedy in the future). By evaluating a range of alternatives, the potential cost impact of the state's H & SC Section 116455 and state DHS Policy Memo 97-005 can be clearly determined.

7. The cost of redundant VOC treatment systems for the existing interim ROD ground water treatment systems is a significant additional cost. Considering that the state DHS Policy Memo 97-005 that requires redundancy is not an ARAR, the board is concerned with the cost of choosing to comply with this policy. The board recommends that the region reevaluate the need for the degree of redundancy required by the state policy. The region should use sound engineering practice considering the need for reliability, cost-effectiveness, and other factors in deciding on the degree of redundancy needed.
8. The board notes that the contingencies to treat perchlorate in the shallow zone and 1,4-dioxane in the intermediate zone are estimated to cost approximately \$8.9 million and \$15.6 million, respectively. Given this high cost, the board recommends that the region remove these contingencies, especially since the ground water data show they will likely not be necessary. The board believes that, if conditions warrant, it would be more appropriate to update the selected remedy in the future. If the region chooses to include the contingencies, the board recommends that the decision documents have an expanded discussion, including clear language regarding triggers and cost.

The NRRB appreciates the region's efforts in working together with the potentially responsible parties, state, and community groups at this site. We request that a draft response to these findings be included with the draft Proposed Plan when it is forwarded to your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both myself and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the NRRB website.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)
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NRRB members